Deutscher Akademischer Austauschdienst
German Academic Exchange Service


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# Master's degree

## Online MSc Wind Energy Systems

**University of Kassel** • Kassel

## Overview

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| **Degree** | Master of Science (MSc) |
| **In cooperation with** | • Fraunhofer Institute for Energy Economics and Energy System Technology (IEE)<br>• Industry experts |
| **Teaching language** | • English |
| **Languages** | English |
| **Mode of study** | Fully online |
| **Programme duration** | 7 semesters |
| **Beginning** | Winter semester |
| **Additional information on beginning, duration and mode of study** | The **Online MSc Wind Energy Systems** will enable you to educate yourself while pursuing your full-time job – any time and everywhere in the world. All courses are taught 100% in English and online in virtual classrooms. You can choose to attend the online lectures live or access the recording at a later point. There is no need to visit us in order to take an exam, as the exams take place online as well. Furthermore, you will have the flexibility to apply for as many or as few courses per semester as you like or even take a semester off whenever you need it. |
| **Application deadline** | **Master's programme**<br>All applicants: 1 September<br><br>Check our website for application deadline extensions.<br><br>**Diplomas of Advanced Studies (DAS)**<br>Winter semester: 1 October<br>Summer semester: 1 April |
| **Tuition fees per semester in EUR** | 2,000 EUR |
| **Additional information on tuition fees** | The costs depend on the chosen study format:<br><br>• Whole Master's degree: 14,000 EUR<br>• Diploma of Advanced Studied (DAS): 6,000 EUR<br>• Single module: 600 EUR (3 credit points); 1,200 EUR (6 credit points) |

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| **Combined Master's degree / PhD programme** | No |
| **Joint degree / double degree programme** | No |
| **Description/content** | The broad teaching philosophy of the **MSc Wind Energy Systems** is reflected in the large number of modules (28 in total) offered to students which can choose flexibly between them. The fundamental modules teach participants the basics about the functioning of electrical and mechanical components of a wind turbine as well as the electrical engineering behind it. Furthermore, students learn how to use various simulation programmes (including MATLAB, OPEN FOAM) and how to model the flows in wind energy systems.<br><br>The Master's programme offers two specialisation paths that build on the foundation laid in the fundamental modules. The first specialisation, **Energy System Technology** (EST), imparts knowledge about the energy system technologies of a wind turbine. This includes, for example, the design of a nacelle system and the control and operational management of a wind turbine. In addition, it offers learnings beyond the technology of a wind turbine, like the grid integration of renewable energies and their storage as well as energy meteorology.<br><br>In the second specialisation, **Simulation and Structural Technology of Wind Energy Systems** (SST), students learn about the design and structure of rotor blades as well as the material behaviour of soils in order to determine the appropriate locations for a wind turbine. They will learn to identify the flow field of a wind turbine and analyse their aerodynamic processes.<br><br>The variety of the programme is further expressed in various non-engineering subjects. These teach students management skills needed for the construction of wind farms and wind parks. The study is rounded off with legal knowledge taught in elective modules such as Contract Law and Energy Law.<br><br>The broad range of courses offered at Master's level entitles students to pursue a doctorate after graduation. As many subjects have a high university standard, graduates are suited to pursue a career in research. However, **the core of the education is to train the students for the wind industry job market**. Classic occupational fields are the R&E departments of a wind power manufacturer and at a planner and project developer office. |

# Course Details

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| **Course organisation** | The Master's programme consists of a total number of 120 credits:<br><br>• At least 30 credit points must be selected from the **Fundamental modules**.<br>• At least 30 credits must be selected from one of the specialisations: **Simulation and Structural Technology (SST)** or **Energy System Technology (EST)**.<br>• Furthermore, a minimum of 12 credits must be acquired from the **Additional Key Competencies** modules.<br>• Another 18 credits must be selected from the following: modules of both **specialisations**, the **Additional Key Competencies** modules and/or **Fundamentals modules**. You can select modules freely from all of these categories.<br>• The **Master's thesis** module comprises 30 credits.<br><br>All modules are shown in the picture below.<br><br>In addition to our Master's programme, we offer several **Diplomas of Advanced Studies (DAS)** that allow you to specialise in different aspects of wind energy. All Diplomas of Advanced Studies (DAS) consist of five carefully selected modules from the Master's programme. As a DAS student, you will be studying together with the Master's students. After your successful participation – or even during your DAS studies – you can choose to switch to the Master's programme in October of any year. You will find all our DAS listed here on our website. |

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| **International elements** | • Projects with partners in Germany and abroad |
| **Integrated internships** | • Optional project week in Germany<br>• Optional internship at Fraunhofer institute or at a German company |
| **Course-specific, integrated German language courses** | No |
| **Course-specific, integrated English language courses** | No |

## Online learning

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| **Pace of course** | Mixed (e.g. fixed exam dates and duration, study content can be studied at any time) |
| **Phase(s) of attendance in Germany (applies to the entire programme)** | Yes, voluntary |
| **Types of online learning elements** | • Discussion forums and / or groups<br>• Online sessions<br>• Online study material provided by institution<br>• Video learning (Pre-recorded videos, Vlogs, Video-Podcasts) |

## Costs / Funding

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| **Tuition fees per semester in EUR** | 2,000 EUR |
| **Additional information on tuition fees** | The costs depend on the chosen study format:<br>• Whole Master's degree: 14,000 EUR<br>• Diploma of Advanced Studied (DAS): 6,000 EUR<br>• Single module: 600 EUR (3 credit points); 1,200 EUR (6 credit points) |
| **Semester contribution** | Approx. 140 EUR for Master's students |
| **Funding opportunities within the university** | No |

## Requirements / Registration

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| **Academic admission requirements** | **(1)** Applicants are required to have a**Bachelor's degree, "Diplom", or equivalent degree**with at least 180 credits in a technical or scientific course in one of the following subject areas: |

- Civil and Environmental Engineering
- Mechanical Engineering
- Electrical Engineering
- Physics

or an equivalent in a course with basic subjects in mathematics, natural sciences, and engineering of at least 60 credits, of which at least 18 are in the field of mathematics (analysis, algebra).

**(2) Letter of motivation** (max. two pages) convincingly explaining personal motivation and suitability for the Master's programme, along with a record of previous academic achievements, field training, and scientific work

**(3) Proof of at least one year of any kind of work experience** after finishing your first degree of higher education is necessary. In special cases, the examination board can decide that the work experience that you had gained before you had finished your first degree of higher education is acceptable as well.

**(4) Proof of English language knowledge** (details below)

**(5) School-leaving certificate** with which you fulfil the entrance requirements for higher education

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| **Language requirements** | Proof of English language knowledge corresponding to level B2 according to the Common European Framework of Reference for Languages (e.g. TOEFL 87 or IELTS 5.0). |
| **Technical equipment and programmes** | • Computer<br>• camera<br>• microphone/ headset<br>• stable internet connection |
| **Application deadline** | **Master's programme**<br>All applicants: 1 September<br><br>Check our website for application deadline extensions.<br><br>**Diplomas of Advanced Studies (DAS)**<br>Winter semester: 1 October<br>Summer semester: 1 April |
| **Submit application to** | **Application with a degree obtained outside of Germany:**<br>You will find a detailed application guide here on our website.<br><br>**Application with a degree earned in Germany:**<br>Click here, please. |

# Services

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| **Supervisor-student ratio** | We have small classes (few students per lecturer), meaning you have the opportunity to talk directly to the teacher and ask questions at any time – during the lecture or at another time via message. |

# Contact

**University of Kassel**
Faculty of Civil and Environmental Engineering

Dian Yunus

34125 Kassel

Tel. +49 5618047482
wes@uni-kassel.de
Course website: https://www.unikims.de/managementprogramme/wind-energy-systems-wes-diploma-advanced-studies-das-0

https://www.facebook.com/Online-MSc-Wind-Energy-Systems-1137243489623879/

https://www.linkedin.com/in/team-wes-online-148b53157/

Last update 26.06.2024 13:52:36

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**Editor**
DAAD - Deutscher Akademischer Austauschdienst e.V.
German Academic Exchange Service
Section K23 – Information on Studying in Germany
Kennedyallee 50
D-53175 Bonn
www.daad.de

**GATE-Germany**
Consortium for International Higher Education Marketing
www.gate-germany.de



The publication is funded by the German Federal Ministry of Education and Research and by contributions of the participating German institutions of higher education.